

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BRYAN HORNUNG, BRYAN MARIETTA and ROBERT K. KING

Appeal No. 2002-0278
Application 08/797,674

ON BRIEF

Before JERRY SMITH, FLEMING, and SAADAT, **Administrative Patent Judges.**

FLEMING, **Administrative Patent Judge.**

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 13, 15 through 18 and 24 through 32. Claim 14 has been canceled. Claims 19 through 23 have been withdrawn from consideration.

Invention

The invention relates to a Scalable Coherent Interface (SCI) system which improves the available bandwidth of the system by

allowing the system to have more than one outstanding request.
See page 2 of Appellants' specification.

Figure 1 depicts a single node of a multi-node, multi-processor computer system. Each node can support up to 16 processors 110. These processors 110 are connected to processor agent chips (PACs) 111. The function of each PAC 111 is to transmit requests from the associated processors 110 through cross bar router chips (RAC) 112 to memory access chips (MAC) 113 and then forward the responses back to the requesting processor. When a processor 110 generates a request to access memory, the associated PAC 111 sends the request through the proper RAC 112 to a MAC 113. If the request is destined for memory 114 on the local node, MAC 113 accesses the memory attached to it. If the request is destined for a memory on another node, MAC 113 forwards the request to TAC 115. TAC 115 is an interface between the node and SCI ring 116. See page 6 of Appellants' specification. Figure 2 shows a high level block diagram of the inventive TAC 200. The table State Machine 203 receives requests from MAC 113. The table Initialization State Machine 203 will send the request to the request activation queue 206. The request will remain in the request activation queue 206 until

there are sources available on ring 116 to handle the delivery of this request. See page 7 of Appellants' specification. A request to ring 116 will use request activation queue 206. See page 8 of Appellants' specification. By using the request activation queue 206 and the response activation queue 210, the system is allowed to handle many outstanding requests and responses at the same time both cam 205 and table 204 can handle different requests. See pages 9 and 10 of Appellants' specification.

Independent claim 1 is representative of Appellants' claimed invention and is reproduced as follows:

1. A system controller for managing a plurality of responses and a plurality of requests between interconnection rings and at least one memory access controller, the system controller comprising:

a request activation queue for storing request information until the rings are accessible; and

a response activation queue for storing response information until the memory access controller is accessible;

wherein the request information is used to construct request data packets; and

the response information is used to construct response data packets.

References

The references relied on by the Examiner are as follows:

Tan et al. (Tan) 5,434,976 Jul. 18, 1995

IEEE Standard for Scalable Coherent Interface (SCI), 1993,
pp. 2-4.

Rejections at Issue

Claims 1 through 13, 15 through 18 and 24 through 32 stand rejected under 35 U.S.C. § 102(b) based upon a public use or sale of the invention. Claims 1 through 3, 8, 24, 26, 27, 30 and 32 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Tan. Claims 4-7, 10 through 13, 15 through 17, 25 through 28 and 31 stand rejected under 35 U.S.C. § 103 as being unpatentable over Tan. Claims 9, 18 and 29 stand rejected under 35 U.S.C. § 103 as being unpatentable over Tan in view of IEEE SCI.

Throughout our opinion, we will make reference to the brief¹ and the answer for the respective details thereof.

¹Appellants filed an appeal brief on April 20, 2001. A notice of defective brief was mailed on April 27, 2001. Appellants filed an amended appeal brief on June 1, 2001. We note that the amended Appellants' brief is the complete brief and we will hereinafter refer to this brief as simply the brief.

OPINION

With full consideration being given to the subject matter on appeal, the Examiner's rejections, and the arguments of Appellants and the Examiner, for the reasons stated **infra**, we reverse the Examiner's rejection of claims 1 through 13, 15 through 18 and 24 through 32 under 35 U.S.C. § 102 based upon a public use or sale of the invention, and we reverse the Examiner's rejection of claims 1 through 3, 8, 24, 26, 27, 30 and 32 under 35 U.S.C. § 102 as being anticipated by Tan. Furthermore, we reverse the Examiner's rejection of claims 4-7, 10 through 13, 15 through 17, 25 through 28 and 31 under 35 U.S.C. § 103 as being unpatentable over Tan, and we reverse the Examiner's rejection of claims 9, 28 and 29 under 35 U.S. C. § 103 as being unpatentable over Tan in view of IEEE SCI.

Rejection Under 35 U.S.C. § 102 based upon a Public Use or Sale

Appellants point out that a declaration under oath by an inventor pursuant to 37 CFR § 1.132 was filed stating that the commercial activity did not comprise a response activation queue. Appellants point out that independent claims 1, 10 and 24 define a response activation queue, which is depicted in figure 2 as item 210. Appellants argue that the record shows that the

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response activation queue was added to the system after the occurrence of the commercial activity in question. Thus, Appellants argue that the commercial activity did not include all the elements of the claimed invention and thereby assert that claims are patentable over 35 U.S.C. § 102. See page 7 of Appellants' brief.

We note that the record shows that a declaration was filed on February 9, 2001 and is recorded in the record as paper no. 14. The declaration is by Bryan Hornung who is one of the inventors of the instant application. Mr. Hornung states that the activation queue of the present invention was developed after the occurrence of the activity described in the information disclosure statement on April 30, 1997.

It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. **See In re King**, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and **Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.**, 730 F.2d 1422, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

The Board's findings must extend to all material facts and must be documented on the record, lest the "haze of so-called expertise" acquire insulation from accountability.

In re Lee, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1435 (Fed. Cir. 2002).

Upon the reliance of the declaration of Bryan Hornung, we find that the commercial activity described in the information disclosure statement of April 30, 1997 did not include all the elements of the claimed invention. Therefore, we will not sustain the Examiner's rejection of claims 1 through 13, 15 through 18 and 24 through 32 under 35 U.S.C. § 102 based upon a public use or sale of the invention.

Rejection under 35 U.S.C. § 102 as being anticipated by Tan

Appellants point out that claim 1 recites a request activation queue for storing request information until the rings are accessible; a response activation queue for storing response information until the memory access controller is accessible; wherein the request information is used to construct request data packets; and the response information is used to construct response data packets. Appellants similarly point out that claim 24 requires storing request information in a request queue until the rings are accessible; storing the response information in a response queue until the memory access controller is accessible; constructing request data packets from the request information when system resources are available; and constructing response

data packets from the response information when the system resources are available. See page 8 of Appellants' brief. Appellants argue that the Examiner's assertion that the TX and RX FIFOs of Tan read on these claims limitations is in error. Appellants argue that the Examiner utilizes unreasonable broad interpretation of the claim limitation. Appellants argue that the Examiner's analysis must consider the words "request" and "response." Appellants argue that response information and request information are known in the art to facilitate distributed processing protocols for accessing remote information associated with hardware level system resources such as shared memory. See page 9 of the brief. Appellants further argue that the specification explicitly defines the terms "request" and "response." Appellants argue that Appellants' specification defines these terms on page 8, line 15, and page 7, lines 19 through 20. See page 10 of Appellants specification.

Appellants argue that Tan teaches that the TX and RX FIFOs are to buffer information generated by higher layer communication program protocols. Appellants argue that thus it is apparent that Tan does not disclose the distributed processing request and response protocols utilized to access system resources at the hardware level. See page 10 of Appellants' brief.

Upon our review of Tan, we find that Tan fails to teach

a request activation queue for storing request information until the rings are accessible; and a response activation queue for storing response information until the memory access controller is accessible; wherein the request information is used to construct request data packets; and the response information is used to construct request data packets

as recited in Appellants' claim 1. Furthermore, we fail to find that Tan teaches

storing request information in a request queue until the rings are accessible; and storing response information in a response queue until the memory access controller is accessible; monitoring system resources; constructing request data packets from the request information when system resources are available; and constructing response data packets from the response information when system resources are available

as recited in Appellants' claim 24. In particular, we find that Tan teaches a system that manages the transmit and received packets data buffer associated with high layer communication protocol. See column 8, lines 38 through 58, of Tan. Tan further discloses that figure 2 illustrates eight access-class transmit queues, one MAC-packet request queue and one non-MAC-packet received queue. Tan further discloses that the queuing structure is used in a data communication controller. See column 9, lines 33 through 56, of Tan. Upon our further review of Tan,

we fail to find that Tan discloses queuing request information or response information as recited in Appellants' claims.

Therefore, we will not sustain the Examiner's rejection of claims 1 through 3, 8, 24, 26, 27, 30 and 32 under 35 U.S.C. § 102 as being anticipated by Tan.

Rejections under 35 U.S.C. § 103

We note that Appellants' claim 10 recites

a request activation queue for storing request information until the rings are accessible; and a response activation queue for storing response information until the memory access controller is accessible; wherein if the address match occurs the contents addressable memory retrieves the information for a matched previous request from the table; the request information is used to construct request data packets; and the response information is used to construct response data packets.

Furthermore, we note that the Examiner has relied on Tan for these limitations as well as the limitation as we pointed out in independent claims 1 and 24. Therefore, we will not sustain the rejection under 35 U.S.C. § 103 for the same reasons as stated above.

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In view of the foregoing, we have not sustained the Examiner's rejection of claims 1 through 13, 15 through 18 and 24 through 32 under 35 U.S.C. § 102(b) based upon a public use or sale of the invention, and we have not sustained the Examiner's rejection of claims 1 through 3, 8, 24, 26, 27, 30 and 32 under 35 U.S.C. § 102 (b) based upon anticipation. In addition, we have not sustained the Examiner's rejection of claims 4-7, 9, 10 through 13, 15 through 18, 25 through 29 and 31 under 35 U.S.C. § 103.

REVERSED

JERRY SMITH)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
MICHAEL R. FLEMING)	
Administrative Patent Judge)	APPEALS AND
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)	INTERFERENCES
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